UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/712,919	11/16/2000	Andre Messager	Q61752	2952

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EXAMINER
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ART UNIT	PAPER NUMBER
2664	7

DATE MAILED: 03/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/712,919	MESSAGER ET AL.
	Examiner	Art Unit
	Mark A Mais	2664

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3 and 10-14* is/are rejected.

7)☒ Claim(s) *4-9* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _____ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some * c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date *4/Nov. 16, 2000*.

4)☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have

been placed of record in the file.

Information Disclosure Statement

2. The information disclosure statement (IDS) was submitted together with the Application on

November 16, 2000. The submission is in compliance with the provisions of 37 CFR 1.56 and

1.97. Accordingly, the examiner considered the information disclosure statement.

Drawings

3. The formal drawings were received on February 1, 2001. These drawings are acceptable.

Specification

4. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

5. The abstract of the disclosure is objected to because it is longer than 150 words and it has

more than one paragraph. Correction is required. See MPEP § 608.01(b).

Claim Objections

6. Claims 4-9 are objected to under 37 CFR 1.75(c) as being in improper form because a

multiple dependent claim cannot depend from another multiple dependent claim. See MPEP

§ 608.01(n). Accordingly, the claims have not been further treated on the merits.

7. Claims 10-11 and 13-14 are objected to because of the following informalities: the claims

include the word 'then' on page 18, line 27 (claim 10); page 19, line 17 (claim 11); page 20, line

6 (claim 13); and page 20, line 25 (claim 14). Examiner has interpreted the claims to more

correctly read 'them.' Appropriate correction is required.

8. Claims 1-14 are objected to because of the following informalities: they all contain the term

"characterized" and do not conform to US claim-writing practice. Appropriate correction is

required.

Claim Rejections - 35 USC § 112

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the
> subject matter which the applicant regards as his invention.

10. Claims 1-2, 10-11, and 13-14 are rejected under 35 U.S.C. 112, second paragraph, as being

indefinite for failing to particularly point out and distinctly claim the subject matter which

applicant regards as the invention. Claims 1, 10, and 13 recite the limitation "the data packets"

in the last paragraph of the claims. Claims 2, 11, and 14 recite the limitation "the user data field"

in the last paragraph of the claims.   There is insufficient antecedent basis for these limitations in

these claims. Appropriate corrections are required.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness

rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

12. Claims 1-3, 10-11, and 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Godse et al. (USP 5,974,048) in view of Luong (USP 6,314,105).

13. With regard to claims 1-3, 10-11, and 13-14, Godse et al. discloses a method of transmitting

data in which, to broadcast a block of information from a first terminal to a set of destination

second terminals, each of which second terminals is connected to a switch of a network **(Figs. 1,**

6, and 9, where the root modules 13, 15, and 18 can be a switching module (ATM switch) or

a broadcast module, col. 3, line 66 to col. 4, line 1, and col. 4, lines 46-50; *see also* **col. 5,**

lines 59-60). Each root module is connected to an end system 17 which can be a computer

32, see Fig. 4, col. 4, lines 56-61. Each root module can be connected to other root modules

(col. 6, lines 52-57) and ultimately to the network, and therefore, in a spanning tree

methodology such as in Fig. 8a wherein each broadcast module sets up a link between the

BN connected to the Upstream End System (UES) and each of the adjacent BNs). The

method consists of: transmitting the block of information form the first terminal to a broadcast

module in a first switch **(Fig. 8a, Broadcast Node (BN) within any one of root modules 13, 15,**

or 18) which is connected directly to said first terminal **(Fig. 8a, BN connected directly to**

Upstream End Systems (UES) 17), broadcasting said block of information from said broadcast

module to switches adjacent said first switch and to destination second terminals which are

connected directly to said first switch **(Fig. 8a, BNs further down the spanning tree, each**

succeeding level labeled as a 'Leaf Link'; *see also* **Fig. 9, wherein each BN can be connected**

directly to either/both another BN or an End System (computer) 17), and receiving said

block of information in the destination second terminals **(Fig. 8a, downstream cells received at**

the ES; *see also* **col. 6, lines 36-44)**, and the block of information is transmitted from the first

terminal to the broadcast module by sending a call request packet **('SSetup' request message,**

col. 7, lines 17-22) from the first terminal to the broadcast module of the first switch to request

the setting up of a virtual circuit between said first terminal and the broadcast module of the first

switch **(col. 2, lines 39-40, each device needs a separate VC for signaling, col. 7, lines 23-28,**

wherein 'SConnect' message allocates the VPI/VCI) placing a block of information to be

broadcast in the data packets or user data field of the virtual circuit set up between said first

terminal and the broadcast module **(Fig. 8a, downstream cells received at the ES;** *see also* **col.**

6, lines 36-44) in response to said call request packet **('SSetup' request message, col. 7, lines**

17-22).

14. Godse et al. does not specifically disclose using the X.25 protocol. However, Luong (USP

6,314,105) discloses a connection-oriented, packet-switched network that uses ATM cells **(col. 1,**

lines 2-5). It is well known in the art that X.25 is a connection-oriented protocol, which requires

VPs/VCs to be set up before serially transferring data packets. Moreover, Luong e al. discloses

that X.25 is a connection-oriented, packet-switched protocol, which is similar enough to ATM to

as to be implemented interchangeably **(col. 6, lines 39-40)**. Thus, it would have obvious to one

of ordinary skill in the art at the time of the invention to have used an X.25 protocol instead of

the ATM protocol because the two protocols make use of packet-switched connection-oriented

methodologies. More importantly, either the X.25 or the ATM protocols can provide a

mechanism for a source station to send data packets along a specific path to a destination station

(col. 1, lines 18-21 and 27-32).

15. With regard to claims 10 and 11, Godse et al. does not specifically disclose a means for

storing and then broadcasting a block of information to be broadcast that has been placed in the

data packets or the user data field. However, it is well known in the art that a switch will have

memory in order to route data packets. For example, Lee et al. (USP 5,719,862) discloses a

switch buffer that can be configured to route data packets within a network by using one of

several methods to include (1) store and forward, (2) cut-through, and (3) modified cut-through

(col. 10, lines 11-20). Moreover, Lee et al. discloses an ATM switch, which uses a virtual path

identifier [virtual circuit] and routes data packets using a MAC address look-up table **(col. 9,**

lines 12-16).

16. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Godse et al. (USP

5,974,048) and Luong (USP 6,314,105), further in view of Murthy et al. (USP 6,545,982).

17. With respect to claim 12, neither Godse et al. nor Luong specifically disclose that each

switch tests whether an adjacent switch has already received a block of information to be

broadcast before sending the block to it (this is related to preventing 'flooding'--wherein a root

terminal in a spanning tree routes identical data packets to all the adjoining and downstream

switches, thereby wasting bandwidth, memory, and processing resources). However, Murphy et

al. discloses a method of routing data packets, which incorporates a spanning tree algorithm **(col.**

8, lines 3-9) as well as custom filtering rules (CFRs) for packets, which determine whether to

filter received blocks of information flagged to be broadcasted **(col. 8, lines 15-26)**. It would

have been obvious to one of ordinary skill in the art at the time of the invention to add the

custom filtering rules (CFRs) **(col. 8, lines 49-52)** in Murphy et al. to the combined

method/structure of Gosne et al. and Luong in order to test whether each adjacent switch has

already received the block of information. Murphy et al. tests whether the adjacent switches

have received a block of information to be broadcast by first checking for the multicast/broadcast

flag **(Fig. 3, Broadcast/Multicast flag 21 = '1'; col. 5, lines 28-35)**, and then generating the

forwarding data structure, XMASK 55 (which is the destination port that the packet is to be

forwarded to) **(Fig. 9, XMASK; col. 11, lines 12-14;** *see also* **col. 14, lines 1-8 describing**

inputs required for producing XMASK 55). CFRs control packet transmission (a.k.a.

filtering) based on packet contents and/or datafield contents **(col. 14, lines 26-29; datafield 17,**

Fig. 2; *see,* **for example, Fig. 5, and col. 8, lines 33, where the filtering of a packet is**

described based on Mask 31; *see also* **col. 8, lines 49-52 and 59-64, where various**

combinations of parameters are possible for filtering out of specific packets). Therefore,

each adjacent switch controls the packet transmission to be broadcast to adjoining switches based

on the CFRs (which checks for previously received blocks of information).

Conclusion

18. Any inquiry concerning this communication or earlier communications from the examiner

should be directed to Mark A Mais whose telephone number is (703) 305-6959. The examiner

can normally be reached on 8:00-4:30.

19. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor,

Wellington Chin can be reached on (703) 305-4366. The fax phone number for the organization

where this application or proceeding is assigned is 703-872-9306.

20. Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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